

**15-Day EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA STATE LANDS COMMISSION**

**REGARDING AMENDMENTS TO
CHAPTER 31F, MARINE OIL TERMINALS
2007 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2**

(The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific. (PART 1 – ADMINISTRATIVE CODE))

The following changes were made to the specific items in the Express Terms and therefore the Initial Statement of Reasons as a result of the comments received during the 60-day public review comment period. (Additions are identified with double underlines and deletions with double strikethroughs)

EXPRESS TERMS:

16. 3102F.3.6.1 Terminal Operating Limits. Figure 31F-2-1

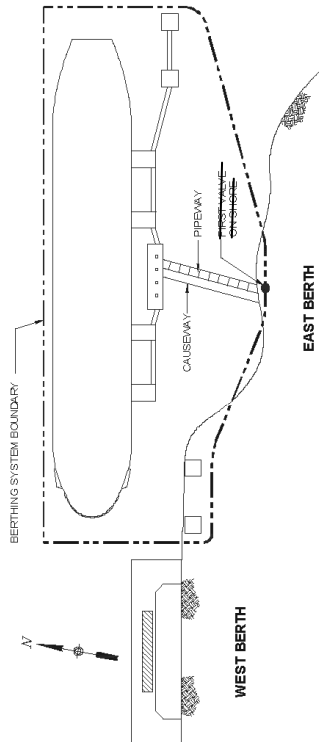
EXAMPLE STATEMENT OF TERMINAL OPERATING LIMITS

BERTHING SYSTEM NAME: _____
 FACILITY OWNER/OPERATOR: _____
 FACILITY ADDRESS: _____
 DATE: _____
 No. OF TRANSFERS/YEAR: _____
 OIL SPILL AT RISK (BBL): _____
 FACILITY SEISMIC CLASSIFICATION: _____
 FACILITY MOORING/BERTHING CLASSIFICATION: _____
 FACILITY FIRE HAZARD CLASSIFICATION: _____

VESSEL SIZE LIMITS:

ALL MOORING LINES SHALL HAVE A MINIMUM BREAKING STRENGTH OF _____
 MAX ARRIVAL DRAFT AT BERTH _____
 MAX. MIN DRAFT (BALLAST CONDITION) FREEBOARD AT BERTH _____
 MIN WATER DEPTH = _____
 WITH UNDERBEL CLEARENCE OF _____
 (FROM OPERATION MANUAL)
 MAXIMUM VESSEL:
 LOA = _____
 DWT = _____
 BEAM = _____
 DRAFT = _____
 LBP = _____
 MINIMUM VESSEL:
 LOA = _____
 DWT = _____
 BEAM = _____
 DRAFT = _____
 LBP = _____

PHYSICAL BOUNDARIES OF BERTHING SYSTEM:



ENVIRONMENTAL CONDITION LIMITS: (MUST BE QUALIFIED AND DOCUMENTED BY A MOORING/BERTHING ANALYSIS)

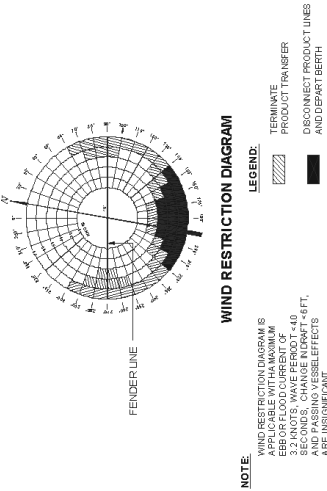


FIGURE 31F-2-1

Authority: Section 8755 and 8757, Public Resources Code
 Reference(s): Section 8750, 8751, 8755 and 8757, Public Resources Code

34. 3103F.5.7 Tsunamis. "...

For the San Francisco Bay, a recent study provides the maximum credible tsunami water levels and current speeds. These results are deterministic and are based on the most severe seismic sources that could reasonably impact MOTs in the San Francisco Bay [3.24]. Table 31F-3-8 provides values for the marine oil terminal locations within San Francisco Bay. Water levels could be positive or negative and current velocities may vary in direction. In order to determine the maximum run-up at a MOT, the largest values should be added to the ~~maximum~~ mean high tide. Further details are available in [3.24].

..."

Authority Cited: Sections 8755, and 8757, Public Resources Code

Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code

42. 3103F.8 Load Combinations.

TABLE 31F-3-12
LRFD LOAD FACTORS FOR LOAD COMBINATIONS [3.43 26]

Load Type	Vacant Condition		Mooring & Breasting Condition	Berthing Condition	Earthquake Condition ³	
Dead Load (D)	$1.2 \phi^1$	0.9	1.2	1.2	$\frac{1.2+k^1}{4+k^3}$	$4.9-k^1$
Live Load (L)	$1.6 \phi^2$		$1.6 \phi^2$	1.0	1.0	
Buoyancy (B)	1.2ϕ	0.9	1.2ϕ	1.2ϕ	1.2^1	0.9^1
Wind on Structure (W)	1.6ϕ	1.6	1.6ϕ	1.6ϕ		
Current on Structure (C)	1.2ϕ	0.9	1.2ϕ	1.2ϕ	1.2	0.9
Earth Pressure on the Structure (H)	1.6	1.6	1.6	1.6	$1.6^4 \phi$	1.6^4
Mooring/Breasting Load (M)			1.6ϕ			
Berthing Load (B _e)				1.6ϕ		
Earthquake Load (E)					1.0	1.0

1. $k = 0.50$ (PGA) The k factor ($k=0.5$ (PGA)) and Buoyancy (B) shall be applied to the vertical dead load (D) only, and not to the inertial mass of the structure. Reduce load factor for dead load (D) to 0.9 to check components for minimum axial load and maximum moment.

2. The load factor for live load (L) may be reduced to 1.3 for the maximum outrigger float load from a truck crane.

3. $k = 0.50$ (PGA) 3. For Level 1 and 2 earthquake conditions with strain levels defined in Division 7, the Current on Structure (C) may not be required.

4. An Earth Pressure on the Structure factor (H) of 1.0 may be used for pile or bulkhead structure.

Authority Cited: Sections 8755, and 8757, Public Resources Code

Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code

43. 3103F.8 Load Combinations.

TABLE 31F-3-13

SERVICE or ASD LOAD FACTORS FOR LOAD COMBINATIONS[3.26]

Load Type	Vacant Condition	Mooring & Breasting Condition	Berthing Condition	Earthquake Condition	
Dead Load (D)	1.0	1.0	1.0	$1+0.7k^1$ $1\pm 0.7k^1$	$1-0.7k^1$
Live Load (L)	1.0	1.0	0.75		
Buoyancy (B)	1.0	1.0	1.0	1.0	0.6
Wind on Structure (W)	1.0	1.0	1.0 0.75		1.0
Current on Structure (C)	1.0	1.0	1.0		
Earth Pressure on the structure (H)	1.0	1.0	1.0	1.0	1.0
Mooring/Breasting Load (M)		1.0			
Berthing Load (B _e)			1.0		
Earthquake Load (E)				0.7	0.7
% Allowable Stress	100	100	100	133 100 ²	

1. $k = 0.5$ (PGA)

2. Increase in allowable stress shall not be used with these load combinations unless it can be demonstrated that such increase is justified by structural behavior caused by rate or duration of load. See ASCE 7 [3.11]

Authority Cited: Sections 8755, and 8757, Public Resources Code

Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code

66. 3107F.2.5.4 Plastic Rotation.

TABLE 31F-7-5

LIMITS OF STRAIN

Component Strain	Level 1	Level 2
MCCS Pile/deck hinge	$\epsilon_c \leq 0.005$ 4	$\epsilon_c \leq 0.025$
MCCS In-ground hinge	$\epsilon_c \leq 0.005$ 4	$\epsilon_c \leq 0.008$
MRSTS Pile/deck hinge	$\epsilon_s \leq 0.01$	$\epsilon_s \leq 0.05$
MRSTS In-ground hinge	$\epsilon_s \leq 0.01$	$\epsilon_s \leq \underline{0.01}$ 0.01 <u>0.025</u>
MPSTS In-ground hinge	$\epsilon_p \leq 0.005$ (incremental)	$\epsilon_p \leq \underline{0.04}$ 0.04 <u>0.025</u> (total strain)

MCCS = Maximum Concrete Compression Strain, ϵ_c

MRSTS = Maximum Reinforcing Steel Tension Strain, ϵ_s

MPSTS = Maximum Prestressing Steel Tension Strain, ϵ_p

Authority Cited: Sections 8755, and 8757, Public Resources Code
Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code

78. 3107F.4 Retaining Structures.

Retaining structures constructed of steel or concrete shall conform to AISC [7.8] or ACI 318 [7.5] respectively. For the determination of static and seismic loads on the sheet pile and sheet pile behavior, the following references are acceptable: NCEL [7.13], Strom and Ebeling [7.14], and PIANC TC-7(Technical Commentary - 7) [7.15]. The applied loads and analysis methodology shall be determined by a California Registered Geotechnical Engineer, and ~~are~~ may be subject to peer review ~~prior to submission to the Division.~~

Authority Cited: Sections 8755, and 8757, Public Resources Code
Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code

85.

3108F.6.2 Fire Hydrants. *Hydrants shall be located not greater than 150 ~~300~~ ft. apart, along the wharf and not more than 300 ft. apart on the approach trestle ~~{Section 4.2.3 of API-2004 [8.4 4]. (N)~~ Additional hose connections shall be provided at the base of fixed monitors and upstream of the water and foam isolation valves. Connections shall be accessible to fire trucks or mutual aid equipment as identified in the Fire Plan ~~(N)~~.*

Hydrants and hoses shall be capable of applying two independent water streams covering the cargo manifold, transfer system, sumps and vessel manifold (N/E).

Authority Cited: Sections 8755, and 8757, Public Resources Code
Reference(s) Cited: Sections 8750, 8751, 8755, and 8757, Public Resources Code